Correspondence

The Editorial Board will be pleased to receive and consider for publication correspondence containing information of interest to physicians or commenting on issues of the day. Letters ordinarily should not exceed 600 words, and must be typewritten, double-spaced and submitted in duplicate (the original typescript and one copy). Authors will be given an opportunity to review any substantial editing or abridgment before publication.

Parasitic Infections Among Traveling Students

TO THE EDITOR: As the world is made smaller and smaller by jet travel, and higher education, once a luxury, becomes almost a necessity, institutions such as the University of California attract students from all over the world. At the University of California, Davis (UCD), the international students make up about 7 percent of the student body or about 3 percent of the population of Davis. In the exchange of cultures and friendships, it may be interesting to find out how much sharing of microbes also occurs.

We have been conducting blood and fecal surveys at UCD for the prevalence of endoparasites among international students and American students who have just returned from spending a year abroad. Blood specimens were examined for the presence of microfilariae by Knott's concentration technique, and for malaria by examining a thick and a thin Giemsa stained smear. Fresh fecal specimens were examined by direct smears and the acid-ether concentration method. In the 140 fecal specimens submitted by students entering UCD in the 1974 fall quarter, we found the parasitic infections shown in Table 1.

TABLE 1.—*Parasitic Infections Found in Fecal Specimens*

Protozoan cysts trophozoites	
Entamoeba histolytica	3 (2%)
Entamoeba coli	15 (11%)
Entamoeba hartmanni	4 (3%)
Giardia lamblia	3 (2%)
Endolimax nana	6 (4%)
Iodamoeba butchlii	2 (1.5%)
Trichomonas homonis	2 (1.5%)
Helminth ova	
Ascaris	2 (1.5%)
Clonorchis	3 (2%)
Dicrocoeliid	1 (0.7%)
Enterobius*	1 (0.7%)
Hookworms	6 (4%)
Hymenolepis nana	1 (0.7%)
Schistosoma mansoni	1 (0.7%)
Strongyloides	1 (0.7%)
Trichostrongylus	2 (1.5%)
Trichuris	17 (12%)

*Adult; ova not usually in feces.

The total number of positive findings on specimens was 48 of 140 (34 percent). The blood examinations yielded only a single but significant finding, that of a Plasmodium malariae infection. We wish to point out that these were the results of only a single examination per student; multiple specimens might have uncovered an even higher percentage of positive cases.

Since many of the parasites found are potential pathogens, and some, such as malaria, are of public health importance, treatment was administered by the clinicians at the Student Health Center, UCD, to the infected persons.

We realize that this was but a small survey conducted in a small college town; however, the importation of parasite populations (diseases) through the influx of migrant workers and foreign immigrants to the West Coast can probably be extrapolated from it. It behooves us to alert medical practitioners in our area about the prevalence of parasitic diseases they may encounter in their practice. Considering the protean nature of the manifestations of various parasitic infections, differential diagnosis ignoring these diseases, which might be thought exotic, would be unwise. As suggested by Dr. David Sencer (in his delivery of the 33rd Charles Franklin Craig lecture in 1968) "in this shrinking world one of the first questions that should be asked in taking the medical history is, 'Where have you been?' "[1]

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REFERENCE

1. Sencer DJ: Health protection in a shrinking world. Am J Trop Med & Hyg 18:341-345, May 1969